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**INFORMATION PROCESSING DEVICE AND METHOD**

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INFORMATION PROCESSING DEVICE AND METHOD

[Joho kyori sochi oyobi hoho]

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[Attached amendments have been incorporated into the text of the translation]

Claims

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1. A type of information processing device characterized by the fact that the information processing device, which is connected to plural terminal devices and, at the same time, is connected via the internet to plural servers, has the following means:  
a first storage means that stores the use of said server via said internet by said terminal device,

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\* [Numbers in the right margin indicate pagination of the original text.]

a second storage means that stores the settlement account pertaining to the use of said server by said terminal device via said internet before the use of said server by said terminal device via said internet,

a computing means that computes the fee pertaining to the use of said server by said terminal device via said internet,

and a charging means that charges the fee computed by said computing means for said settlement account stored in said second storage means.

2. The information processing device described in Claim 1 characterized by the fact that said second storage means stores a credit card number or a bank account number as said settlement account.

3. An information processing method characterized by the following facts:

in the information processing method, processing is performed for information pertaining to the use of plural servers by plural terminal devices that are connected to said plural servers via the internet; in this method,

an information processing device that processes information pertaining to the use of said servers by said plural terminal devices is connected to said internet;

when said terminal device uses said server via said internet, said information processing device detects this state;

a settlement account pertaining to the fee for the use of said server by said terminal device via said internet is stored beforehand in said information processing device before the use of said server by said terminal device via said internet;

when said terminal device uses said server via said internet, the use fee is computed by said information processing device;

and said computed use fee is charged by said information processing device to said pre-stored settlement account.

#### Detailed explanation of the invention

[0001]

##### Technical field of the invention

The present invention pertains to a type of information processing device and an information processing method. Especially, the present invention pertains to a type of information processing device and an information processing method for processing the use fee by a terminal device connected to the internet.

[0002]

Prior art

Figure 19 is a diagram illustrating an example constitution of a network system in an information processing device of the prior art. The subscribers (users) have terminal devices (1-1)-(1-12), which are connected via prescribed access providers (AP) (2-1)-(2-3) to internet (3), respectively. Connected to said internet (3) are also information providers (IP) (4-1)-(4-3). Said internet (3) allows mutual communication between computers according to a protocol defined by the Transmission Control Protocol/Internet Protocol (TCP/IP).

[0003]

Also, on said internet (3), an information retrieval system known as the World Wide Web (WWW) is constructed. In this WWW, by means of a protocol known as the Hyper Text Transfer Protocol (HTTP), information retrieval and display can be performed easily. Examples of application software (WWW browser) on the side of the terminal device for said WWW include Netscape Navigator (trademark) of the Netscape Corp. (a company) and Mosaic (trademark) of NCSA, and an example of application software (WWW server) on the information provider side is Netscape Commerce Server (trademark). Each user can access the WWW server using said WWW browser and receive information and services. Also, each information provider can use the WWW server in providing information and service to the WWW browser.

[0004]

Recently, with an increase in the users of said internet (3), there is a significant trend for commercial use of internet (3). As a first method of electronic commerce in the prior art, the following scheme is adopted: a menu picture transmitted from the WWW server (hereinafter to be referred to as server) is displayed on the WWW browser (hereinafter to be referred to as browser). From the menu picture, the user selects the desired commodity or service, reads the explanation, and applies to buy the commodity or service via a separate fax machine or telephone. That is, in this example, internet (3) is merely used for explaining the commodity and service.

[0005]

As a second method, the following scheme is adopted. From the server (information provider (4-j)), the menu picture shown in Figures 20 and 21 is provided to the browser (terminal device (1-i)) and is displayed. In this example, in the list shown in the menu in Figure 20, the type and quantity of the desired commodity are input. Then, as shown in Figure 21, the name,

address, phone number, birth date, credit card number, credit card expiration date, etc. are input. When the server receives the input, the ordered commodity is delivered, and, at the same time, the server charges the fee to the input credit card.

[0006]

Each information provider (4-j) signs a contract individually with the credit card company, and receives payment of a prescribed proportion with respect to the charged fee from the credit card company. The credit card company then asks the user to pay the use fee (charged amount).

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[0007]

Because a user may use various credit cards, corresponding to these credit cards, each information provider (4-j) has to sign contracts with plural credit card companies, respectively. For each transaction, said information provider (4-j) has to call the check the credit for each credit card, and the operation is complicated. In this case, for example, one may introduce the application software Intercafis (trademark) of NTT Data Communications Co., Ltd. at information provider (4-k) to allow use of the Credit System and Finance Information System (CAFIS) (5) of NTT Data Communications Co., Ltd. (a company). When this application is used, information provider (4-k) accesses CAFIS (5) via a dedicated line, so that it can access computer systems (6-1)-(6-3) of plural credit card companies (in this example, credit card companies A-C), and can be briefed on-line concerning the credit state of the credit card with a prescribed number.

[0008]

In this way, in electronic commerce (service mark) by Netscape Corp. that supports commercial transactions by means of internet (3), when the credit card number and the owner's address, name, phone number, etc. are input, the information is formed as packets that are transmitted from terminal device (1-i) via internet (3) to a prescribed (site for placing the order) information provider (4-j). When said information provider (4-j) receives the data for purchase of the commodity, it performs the delivery procedure.

[0009]

Internet (3) is open with regard to the communication address and communication path, and the communication protocol is also standardized. Consequently, the transmitted data may be received by a third party who may abuse the intercepted information.

[0010]

Consequently, browser or server software has been developed that encrypts said data when they are transmitted. Concerning said encryption, for example, a communication system using an RSA as a type of the public key system has been proposed by Secure Sock Layer.

[0011]

In this system, the browser transmits the encryption key to the server. The server uses the received encryption key to encrypt the data for transmission to the browser. The browser holds a decoding key for decoding the transmitted encryption key, and a third party is not allowed to know the encryption key. Then, it uses the decoding key to decode the encrypted data received from the server.

[0012]

Problems to be solved by the invention

However, even when said encryption is performed, leakage of the decoding key to or discovery of the decoding key by [a third party] may still occur for certain reasons.

[0013]

Also, in said system, each information provider (4-j) has to sign a contract and to connect to a final decision system (computer system) individually for each credit card company. Consequently, the system is complicated, and this is a factor in hampering individual persons or medium or small companies from becoming an information provider on internet (3).

[0014]

The objective of the present invention is to solve the aforementioned problems of the prior art by providing a scheme characterized by the fact that while leakage of the credit card number, etc. is suppressed, individual persons or relatively small businesses can easily become an information provider.

[0015]

Means to solve the problems

Claim 1 of this patent application provides a type of information processing device characterized by the fact that it has the following means: a first storage means that stores the use of said server via said internet by said terminal device, a second storage means that stores the settlement account pertaining to the use of said server by said terminal device via said internet before the use of said server by said terminal device via said internet, a computing means that

computes the fee pertaining to the use of said server by said terminal device via said internet, and a charging means that charges the fee computed by said computing means for said settlement account stored in said second storage means.

[0016]

Claim 3 of this patent application provides an information processing method characterized by the following facts: in this method, an information processing device that processes the information pertaining to the use of said servers by said plural terminal devices is connected to said internet; when said terminal device uses said servers via said internet, said information processing device detects this state; the settlement account pertaining to the fee for the use of said server by said terminal device via said internet is stored beforehand in said information processing device before the use of said server by said terminal device via said internet; when said terminal device uses said server via said internet, the use fee is computed by said information processing device; and said computed use fee is charged by said information processing device to said pre-stored settlement account.

[0017]

In the information processing device described in Claim 1, the first storage means stores the use of said server via said internet by said terminal device; the second storage means stores the settlement account pertaining to the use of said server by said terminal device via said internet before the use of said server by said terminal device via said internet; the computing means computes the fee pertaining to the use of said server by said terminal device via said internet; and the charging means charges the fee computed by said computing means for said settlement account stored in said second storage means.

[0018]

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In the information processing method described in Claim 3, an information processing device that processes the information pertaining to the use of said servers by said plural terminal devices is connected to said internet; when said terminal device uses said server via said internet, said information processing device detects this state; the settlement account pertaining to the fee for the use of said server by said terminal device via said internet is stored beforehand in said information processing device before the use of said server by said terminal device via said internet; when said terminal device uses said server via said internet, the use fee is computed by said information processing device; and said computed use fee is charged by said information processing device to said pre-stored settlement account.

[0019]

#### Embodiment of the invention

Figure 1 is a diagram illustrating an example of the constitution of the network system in which the information processing device of the present invention is applied. The same part numbers as those used in Figure 19 are adopted in this figure. In this system, too, plural information providers (IP) (4-1)-(4-4) are connected to internet (3). Also, terminal devices (1-1)-(1-3) are connected via conventional phone lines to charging proxy (11), and charging proxy (11) is connected to internet (3). Information provider (4-3) is also connected to an external stock management system.

[0020]

In this application example, charging proxy (11) also works as an access provider (AP) with an information provider function. Also, charging proxy (11) is connected via CAFIS (5) to computer systems (settlement systems) (6-1)-(6-3) of plural credit card companies. Consequently, said charging proxy (11) also has application software (such as Netscape Commerce Server) that can be used in the WWW system.

[0021]

Figure 2 is a diagram illustrating a specific example of constitution of charging proxy (11). CPU (21) executes various types of processing according to the program stored in ROM (22). Also, RAM (23) appropriately stores programs and data needed for executing various types of processing by CPU (21). Connected to interface (24) are hard disk (HD) (25), magneto-optical disk (26), communication part (27), input part (28), display unit (29), etc.

[0022]

Said hard disk (25) appropriately stores data, programs, etc. that require relatively high speed of access. Said magneto-optical disk (26) appropriately stores data, programs, etc. that allow relatively lower speed of access than that of hard disk (25). Said communication part (27) performs communication among the internet, dedicated lines, public telephone lines, etc. Said input part (28) is composed of a keyboard, mouse, etc., and it is for input of various instructions. Said display unit (29) is composed of a CRT, LCD, etc., and it is for displaying prescribed text, pictures, etc.

[0023]

Figure 3 is a diagram illustrating an example of the internal constitution of terminal device (1-i). This terminal device (1-i) has CPU (41) to display unit (49), and it basically has the



same constitution as that of charging proxy (11) that has CPU (21) to display unit (29). However, said charging proxy (11) has a large capacity and higher speed than terminal device (1-i). Although not shown in the figure, information provider (4-j) also has basically the same constitution as that of charging proxy (11).

[0024]

In this application example, each user (subscriber) accesses a prescribed information provider (hereinafter to be referred to as server) (4-j) from said terminal device (1-i), and orders a commodity, service, etc. from the information provider. Then, by automatic payment through a credit card or bank account, etc., the fee is paid. In this case, the user must go through the procedure of registration as a member of prescribed charging proxy (11) beforehand. In this procedure, the user fills in the necessary items of a prescribed application form, and mails the filled-in form. As another scheme, the sign-up procedure may also be carried out on-line from said terminal device (1-i) through a telephone line or, if needed, through internet (3), to access charging proxy (11). Figures 4 and 5 illustrate the on-line sign-up treatment in this case.

[0025]

First, in step S1, terminal device (1-i) accesses charging proxy (11) via a conventional telephone line. In this case, in step S2, CPU (21) of charging proxy (11) reads from magneto-optical disk (26) a text or the like that gives a brief account regarding the on-line service name, a greeting message, and an abstract of the service (electronic commercial service), and transmits it from communication part (27) to terminal device (1-i). The text of said name, greeting message, etc. is received by communication part (47) of terminal device (1-i) via a telephone line, and it is displayed on display unit (49).

[0026]

Then, in step S3, charging proxy (11) transmits and displays caution items, such as "We cannot accept an individual member without a credit card," or "For those younger than 20 as well as companies or groups, please mail the application form separately. We are sorry but please file your application by mail."

[0027]

In step S4, the user judges whether the caution items displayed in step S3 apply. If YES, the user manipulates input part (48) and makes the corresponding input. CPU (41) then transmits the input through communication part (47) to communication part (27) of charging proxy (11).

When CPU (21) of charging proxy (11) receives the input through communication part (27), the process goes to step S5, and a message such as "Please file your request for an application form through telephone or e-mail to the following window. We will soon send you an application form" is transmitted. This message is sent through communication part (27) to communication part (47) of terminal device (1-i), and it is displayed on display unit (49). In this case, the time, telephone number, e-mail address, etc. needed for reception are also transmitted and displayed. Under the guidance of said message, the user can perform the procedure of sign-up by means of telephone or e-mail.

[0028]

Then, the process goes to step S6, the line is cut off, and the procedure of on-line sign-up is finished.

[0029]

On the other hand, in step S4, if it is judged that the applicant is younger than 20, or is a company or a group, the process goes to step S7, and the name, address, PO Box, telephone number, etc. are input by manipulating input part (48) of terminal device (1-i). When CPU (21) of charging proxy (11) receives the input, it sends the reception date and reception No. to terminal device (1-i), and such message is displayed on display unit (49).

[0030]

In step S9, the input of step S7 is registered in a dedicated database for inquiry formed on magneto-optical disk (26) of charging proxy (11), and also, in step S10, treatment is performed for sending an application form to the address and name input in step S7. When the user receives the application form mailed to him/her, the user fills in the necessary items and sends it back to sign-up.

[0031]

In each of the steps of treatment shown in Figures 4 and 5, basically, the user performs the input with the procedure shown in Figure 6.

[0032]

That is, on display unit (49) of terminal device (1-i), the message of "Please input \*\*\*" is displayed. Also, when there is a list or an input form, such list or form is also displayed. The user manipulates input part (48) corresponding to the displayed message to perform the desired input.

CPU (21) of charging proxy (11) checks the input content. If there is an error, the input can be repeated.

[0033]

On the other hand, if the input is correct, the input content is displayed on display unit (49), and display (1:OK, 2:NG) for checkup is shown to prompt for input corresponding to the display. After the input is made, the process goes to the treatment of the next item.

[0034]

Back to Figure 4, in step S4, if it is judged that the applicant is not a person younger than 20, a company or a group, the process goes to step S11 to start the treatment of on-line sign-up. In step S12, a message of "Do you want to read the agreement?" is displayed on display unit (49) of terminal device (1-i). If the user inputs to express the desire to read the agreement, the process goes to step S13, and CPU (21) transmits the agreement to terminal device (1-i) for display on display unit (49).

[0035]

Then, the process goes to step S14, and the message of "Do you accept the Agreement?" is displayed on display unit (49). If the user inputs to show NO to the agreement, the process goes to step S15, and a message of "Are you sure that you want to reject the Agreement?" is input. If NO is input, the process returns to step S14, and the message of "Do you accept the Agreement?" is shown again. If NO to the agreement is input again, the process goes from step S15 to step S16, and a message of "Please file for sign-up next time. Thanks." is displayed. The process then goes to step S6, the line is cut off, and the processing comes to an end.

[0036]

In step S14, if the user inputs YES to the Agreement, the process goes to step S17, and the user inputs the following: name, Japanese spelling of the name, sex, birth date, job, present address (prefecture, county), present address (district, street, etc. in the county), its Japanese spelling, PO Box, telephone number, type of telephone (public line or ISDN), fax number, application communication environment, etc.

[0037]

The process then goes to step S18, and the user is asked to input yes/no of contact in case of emergency. If YES, the process goes to step S19, and the user is asked to input the name and telephone number of the person for contact in case of an emergency. When this input is carried

out, or if the input in step S18 indicate that there is no person for contact in case of an emergency, the process goes to the user ID input routine shown in Figure 5.

[0038]

In the user ID input routine, first, in step S31, the user is asked to input the desired user ID. After this input is made, CPU (21) of charging proxy (11) goes to step S32, access is made to the member master (user ID database) formed on magneto-optical disk (26), and if the input user ID has been used by another member is checked. In addition, in step S33, access is also made to a temporary member master (the master for members during the period from filing of sign-up to completion of the examination for sign-up) formed on magneto-optical disk (26), and if the input user ID is already registered in the temporary member master is checked.

[0039]

In step S34, judgment is made on whether the user ID input in step S31 is the same as a user ID that has been registered in the member master or temporary member master. If the user ID has been used, the process returns to step S31, and the user is asked to input another user ID.

[0040]

In step S34, if it is judged that the input user ID is a user ID which has not been used in registration in the member master or temporary member master, the process goes to step S35, and the user is asked to input a password. In step S36, the user is asked to re-input the password. In step S37, whether the two passwords input in steps S35 and S36 are the same is checked. If the two passwords are not the same, the process goes to step S38, and a message of "Passwords are different." is shown on display unit (49) of terminal device (1-i). Then, it returns to step S35, and the user is asked to re-input the password.

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[0041]

Then, in step S37, if it is judged that the two passwords input in step S35 and step S36 are the same, the process goes to step S39, and a message of "Checking of password OK" is displayed.

[0042]

Then, the process goes to step S40, and charging proxy (11) displays on terminal device (1-i) a list of use prices of member A and member B. For example, for member A, a prescribed basic monthly fee must be paid, while the purchase unit price of an individual commodity or service is lower than that for member B. On the other hand, for member B, while no monthly fee

is charged, the unit price for an individual commodity or service is higher than that for member A. In addition, the types of members may be classified according to the type of service provided to them, respectively.

[0043]

In step S41, the user inputs to select member A or member B. Then, in step S42, the user manipulates input part (48) to input the type, number, and expiration time of the credit card to be used for settlement when a commodity or service is purchased.

[0044]

The process then goes to step S43, and CPU (21) of charging proxy (11) displays a message of "How did you become aware of this service?" as well as a list of choices for the answer, such as an advertisement in a magazine, an article in a magazine, learning from a friend, the WWW, an in-shop campaign, and other selectable items. The user then selects the appropriate answer.

[0045]

Then, in step S44, a message of "Do you have a sign-up code?" is shown on display unit (49). If the user already has a sign-up code, the process goes to step S45, and the user inputs the sign-up code. The sign-up code, for example, may be the encoded number of a campaign, the ID of an introducer, etc.

[0046]

After the treatment of step S45, or if the user inputs in step S44 to show that there is no sign-up code, the process goes to step S46. In this step, a message of "Please inform us of the items (up to 5 items, each in 10 or less characters) of interest to you." is displayed. Then, the process goes to step S47, and the user inputs the items of interest that apply, such as golf, music, movie, etc.

[0047]

After performing the aforementioned input, in step S48, the following message is displayed on terminal device (1-i): "Congratulations on your sign-up. We will mail the result of examination of sign-up within \* days. In case of an inquiry or question, please contact the following window." In addition, a telephone number, e-mail address, etc. are displayed. Then, in step S49, the line is cut off, and, in step S50, the items input in the aforementioned treatment are registered in the temporary member master formed on magneto-optical disk (26).

[0048]

Concerning the result of examination of the sign-up, if the application is accepted, a letter is mailed to the user, and also, the registration information is transferred from the temporary member master to the member master for storage. On the other hand, if, for certain reasons, the result of the examination of the application of sign-up is rejected, a letter concerning this is mailed, and the registration is erased from the temporary member master.

[0049]

After the aforementioned operation, for example, as shown in Figure 7, a user ID database is formed in the member master of magneto-optical disk (26) of charging proxy (11). In this user ID database, the items input in the various steps shown in Figures 4 and 5 are registered for each user ID. Also, in the user ID database, in addition to the aforementioned items, the access history, such as allotment IP address allotted to each terminal device, the server accessed by each terminal device, the accessed file, etc., is also stored.

[0050]

Here, the allotment IP address means the IP address allotted to each terminal device (1-i). That is, for each information processing device connected to internet (3), an IP (Internet Protocol) address is allotted from a Network Information Center (NIC) (in Japan, Japan Network Information Center (JPNIC)). For charging proxy (11) that also operates as an access provider, for allotment to terminal device (1-i) of the members under its management, it receives an allotment of a prescribed number of IP addresses from NIC, JPNIC, etc. Then, because charging proxy (11) is not accessed from all members at all times, a user that uses a terminal device connected to the access point via a telephone line is asked to input an ID and a password, and whether the user of the terminal device is a member is checked. If the user is found to be a member, an IP address that is idle at the time is allotted to its terminal device.

[0051]

For this purpose, as shown in Figure 8, CPU (21) of charging proxy (11) stores the IP address allotment table at the time in RAM (23). Then, when a user access from a prescribed terminal device, an unused IP address is searched from the allotment table and is allotted to the terminal device.

[0052]

Consequently, when terminal devices access internet (3) by means of dial-up connections, the IP addresses are changed each time. In the user ID database, the IP address allotted to each user is also stored as an item of the access history.

[0053]

Also, allotment of the IP address may be executed if a computer system having a model that supports the PPT protocol as represented by the ASEND (trademark) system, is connected to charging proxy (11).

[0054]

In this application example, because charging proxy (11) also operates as an access provider, members that can only use the service of access to internet (3) are also registered. The access members are allowed to access the prescribed server via internet (3), yet they are not allowed to receive the on-line shopping service (charging service). The members of the on-line shopping service are automatically taken as access members.

[0055]

In the following, an explanation will be given with reference to Figure 9 and 11 regarding the treatment if terminal device (1-i) of a prescribed user accesses a prescribed information provider (4-j) via charging proxy (11) for on-line purchase of a commodity. Also, for convenience, in these figures, the treatments performed at terminal device (1-i) (subscriber) (WWW browser), charging proxy (11) (charging party) and information provider (4-j) (on-line shopping party) (WWW server) are shown in different columns.

[0056]

As explained above, in this system, too, a WWW retrieval system is used. Consequently, each terminal device has a WWW browser (such as Netscape Navigator); information provider (4-j) has a WWW server; and charging proxy (11) also has an application that works on the WWW (such as Netscape Commerce Server).

[0057]

At first, in step S71, terminal device (WWW browser) (1-i) assigns the menu picture (home page) of the on-line shopping party (information provider (4-j)). In the WWW system, by means of a type of address known as an URL (Uniform Resource Locator), assignment is performed for the prescribed picture (field) on internet (3). In the URL, usually, the WWW

server is assigned by means of the domain name. For example, when the URL is <http://www.sony.co.jp/sonydrive/index/html>, the domain name is [www.sony.co.jp](http://www.sony.co.jp). Because the actual access to the server is carried out by means of the IP address, for the system for acquisition of the IP address from the domain name, there is a DNS (Domain Name Server), and the WWW browser performs inquiry there.

[0058]

In this case, the URL may be directly input to the screen, and, when the picture linked by HTML (Hyper Text Markup Language) to the menu picture is displayed on display unit (49) of terminal device (1-i), assignment is possible by clicking the mouse of input part (48) on the picture.

[0059]

When said assignment is made, terminal device (1-i) outputs the corresponding request to the WWW server. However, in practice, transfer is performed via charging proxy (11) preset at the terminal device, so the request is input to charging proxy (11). After receiving said request, in step S72, with the recognition function of the HTTP, charging proxy (11) receives the input of the user ID and the password, judges whether it is an access from a registered access member, and, if the judgment is not a registered access member, rejects the access. For this judgment, because recognition is provided by the user ID and password when connection is made to the access point, it can be carried out by means of the IP address allotted to the terminal. If the access is from a registered access member, charging proxy (11) transfers the request from the WWW browser as is to the WWW server via internet (3).

[0060]

For example, when the buttons of shopping and VOD (Video On Demand) are displayed as shown in Figure 12 on display unit (49) by the WWW browser, when cursor (53) is driven to move and display on button (51) of shopping, on URL display part (52) of display unit (49), the URL corresponding to said shopping button (51) is displayed. Then, the user uses the mouse to click while cursor (53) is positioned on said shopping button (51) to perform access for the URL displayed on URL display part (52) (access for the server of on-line shopping).

[0061]

When the WWW server receives the request for transfer of the menu picture (the menu picture of on-line shopping), in step S73, the data of the corresponding menu picture are output to the WWW browser. The data are transferred via internet (3) to charging proxy (11). In step



S74, said charging proxy (11) receives the transferred data of the menu picture, and it further transfers them to the WWW browser.

[0062]

As explained above, in the WWW system, the picture is formed from the data in the text format known as HTML. Consequently, the HTML text is transferred among the WWW browser, charging proxy (11), and the WWW server.

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[0063]

In step S74, when charging proxy (11) further transfers the data of the menu picture sent from the WWW server to terminal device (1-i), on display unit (49) of terminal device (1-i), for example, as shown in Figure 13, the menu picture is displayed for purchase of prescribed commodities (commodities W-Z as shown in Figure 13) by on-line shopping.

[0064]

Also, in said WWW system, various treatments are executed with the series of treatments (one answer to each request) indicated as steps S71-S75 taken as a unit (session).

[0065]

In step S75, while the menu picture for commodity purchase as shown in Figure 13 is displayed on display unit (49) of the WWW browser, the user judges whether commodities are present that he/she want to purchase. If no commodity is to be purchased, for example, the user uses the mouse to click the END button shown in Figure 13. As a result, the on-line shopping treatment comes to an end.

[0066]

On the other hand, when the user judges that there is a commodity to be purchased on the menu picture, the process goes to step S76, and the commodity to be purchased is selected on the menu picture. In the example shown in Figure 13, the user moves cursor (53) to click the desired button among the buttons of commodities W-Z to select the desired commodity.

[0067]

When said selection is made, the WWW browser transfers the signal corresponding to the selection to charging proxy (11). As charging proxy (11) receives the selection data sent to it, treatment is performed in step S77 to further transfer the selection data to the WWW server. Figure 14 is a diagram illustrating in detail the treatment of said step S77.

[0068]

Concerning the treatment shown in Figure 14, at first, in step S121, CPU (21) acquires the IP address allotted to said terminal device (1-i) to which the data have been transmitted. As shown in Figure 8, this IP address is allotted by charging proxy (11) to self terminal device (1-i). Consequently, it can be found from the IP address allotment table shown in Figure 8. The process then goes to step S122, and, from the database of the user ID corresponding to the IP address, the member information (such as the type of credit card, its number, expiration time) is acquired. The user ID corresponding to the IP address can be acquired from the IP address allotment data shown in Figure 8. Then, the member information (card expiration time) corresponding to said user ID can be acquired from the user ID database shown in Figure 7.

[0069]

Also, when the data item of the expiration time of the credit card is acquired, not only it can be acquired from the user ID database, but also CAFIS (5) can be accessed as needed to judge whether any change has occurred. CAFIS (5) accesses computer systems (6-1)-(6-3) of the corresponding credit card company to acquire the data item of the expiration time of the current credit card. The data item is then transferred to charging proxy (11).

[0070]

Said [treatment of the] data item of the expiration time of the credit card is carried out by charging proxy (11) instead of by individual information providers. Consequently, the information provider does not need to sign contracts with individual credit card companies. As a result, the constitution of the system is simpler.

[0071]

Then, the process goes to step S123. In this step, CPU (21) sets the category ID and password corresponding to the member information acquired in step S122. For example, if it is judged from the card expiration time acquired in step S122 that the credit card is now effective, valid is set as the category ID, and ok is set as the password. On the other hand, if it is judged that the credit card is invalid, expired is set as the category ID, and ok is set as the password.

[0072]

If the service of the WWW server is only for prescribed members, and this service is not available for the accessing member at the time, "denied" is set as the ID, and "OK" is set as the password. With this judgment, it is possible to determine if the URL requested by the WWW browser is the URL of a pre-registered service.

[0073]

the process then goes to step S124. In this step, according to the HTTP, the selection data input from the WWW browser are transferred to the WWW server, and, at the same time, the IP address of charging proxy (11), the category ID set in step S123, and the password are transferred to the server.

[0074]

Now return to Figure 9. When charging proxy (11) transfers the selection data in step S77, in step S78, the WWW server receives the data transferred from charging proxy (11), and from the data, whether access has been made and whether the member that is performing on-line shopping is a member that has been pre-registered in the WWW server is judged. Details of this judgment are shown in Figure 15.

[0075]

As shown in Figure 15, at first, in step S141, the data from charging proxy (11) as well as the IP address, category ID, and password are acquired. The charging party not only signs contracts with many users for them to be on-line shopping members, but also signs contracts with many on-line shopping parties (WWW servers), so that it itself (charging proxy (11)) becomes an on-line shopping member in the WWW server. The WWW server has the same constitution as that of charging proxy (11) (Figure 2), and it has member information pre-registered on a magneto-optical disk or hard disk contained in it. In step S142, judgment is made on whether the IP address of the charging party acquired in step S141 is an IP address pre-registered as a member.

/9

[0076]

If it is judged that the IP address acquired in step S141 is different from the pre-registered IP address, the process goes to step S143, and it is judged that this access is made from a non-member.

[0077]

On the other hand, in step S142, if it is judged that the IP address acquired in step S141 is the same as the IP address of the pre-registered charging party, the process goes to step S144, and judgment is made on whether the category ID acquired in step S141 is registered.

[0078]

For the WWW server, when a contract is signed with charging proxy (11), it is pre-determined that if an access comes from a user with an effective card, valid is transmitted as the category ID, while if the access comes from a user with an expired card, expired is transmitted as the category ID. If the WWW server judges that the category ID is valid, the process goes to step S145, and access from an on-line shopping member is judged. On the other hand, if it is judged that the category ID is expired, the process goes to step S143, and that the access comes from a non-member is judged.

[0079]

Now return to Figure 9. If it is judged that the access is from a non-member in step S78, the process goes to step S79, and the WWW server reads the picture that indicates not-for-use, and sends it to charging proxy (11). When charging proxy (11) receives the data item of the not-for-use picture transferred to it, in step S80, it is further transferred to the WWW browser. In the WWW browser, when the not-for-use picture transferred from charging proxy (11) in step S81 is received, the order for purchase of the commodity by on-line shopping is cancelled.

[0080]

In step S78 shown in Figure 9, access restriction to members is performed. In step S77, a direct judgment is made based on the member information, and a picture that cannot be used by charging proxy (11) also can be transferred in step S80. In this case, the load of access restriction in the WWW server is reduced.

[0081]

On the other hand, in step S78, if it is judged that the access comes from a member, the process goes to step S82, and the WWW server judges whether the commodity is in stock. In order to check the stock state, the WWW server uses the mechanism of the Common Gateway Interface (CGI) and accesses stock management system (12) as an external program, and yes/no of stock is checked in real time. Then, if it is judged that the commodity assigned in step S76 is out of stock, the process goes to step S83, and the data item of the picture indicating the out-of-stock state is transferred to charging proxy (11). When charging proxy (11) receives the data item of the picture indicating out-of-stock, in step S80, it is transferred to the WWW browser. In step S81, when the WWW browser receives the data item of the picture indicating out-of-stock, it displays the picture, and, based on this display, the order for the commodity is cancelled.

[0082]

On the other hand, in step S82, if it is judged that the commodity is in stock, the process goes to step S84. The WWW server generates the data item of the picture for checking the commodity and its amount assigned for purchase, and sends it to charging proxy (11). As needed, this treatment can be carried out by means of the CGI with an external program. When charging proxy (11) receives the picture data item transferred to it in step S85, the commodity and its amount are temporarily stored in hard disk (25). In this way, the image data item for checkup is temporarily stored in charging proxy (11) before it is actually transferred to the user, so that any change after the data item is transferred to terminal device (1-i) can be prevented.

[0083]

In step S86, charging proxy (11) sends the picture data item for checkup to the WWW browser. In step S87, the WWW browser receives the picture data item, and outputs it to display unit (49) for display. As a result, for example, the picture for checkup of purchase of a commodity shown in Figure 16 is displayed on display unit (49).

[0084]

This example of display indicates that commodity W of ¥1200 and commodity Y of ¥3500 are ordered, and the total amount is ¥4700. Also, on the lower-right portion of the screen, buttons with YES and NO for the user to express whether he/she agrees to purchase the commodities are shown.

[0085]

In this way, in the data item of the picture for checkup, the total amount of the commodities and the details of the amounts of the commodities of the purchase are described as comments of HTML or as display data. The specific display format is determined beforehand between charging proxy (11) and the WWW server. In the case of a description with HTML, for example, pairs of keywords (SUM, UNIT, etc.) and the values (4700, YEN, etc.) can be set, such as SUM = 4700 UNIT = YEN YES = "shopping/ok" NO = "shopping/no." Here, "shopping/ok" and "shopping/no" are URLs of the pictures to be displayed in the cases of yes/no of consent, respectively.

[0086]

Said charging proxy (11) analyzes the data item of the picture for checkup, and computes and stores the requested amount. Also, said information is stored along with the IP address and

the member information obtained from the WWW browser. Consequently, in charging proxy (11), it is possible to perform the treatment of charging for plural WWW browsers.

[0087]

In step S88, the user watches the checkup picture as shown in Figure 16, and judges yes/no of consent to buy the commodity. If the user does not want to buy the commodity, the process goes to step S89, and the user selects the NO button (the button having the characters of NO as shown in Figure 16). When this operation is performed, terminal device (1-i) outputs a signal requesting transfer of the picture of the URL (assignment picture) corresponding to the manipulated button via charging proxy (11) to the WWW server.

[0088]

In step S90, charging proxy (11), which has received the request for transfer of the assignment picture, sends the request to the WWW server. In step S91, when the WWW server receives the request for transfer of the assignment picture, it reads the picture of rejection corresponding to the request, and sends the data item to charging proxy (11). In step S92, when charging proxy (11) receives the data item of the picture of rejection, it further sends it to the WWW browser. In step S93, when the WWW browser receives the data item of the picture, it outputs the data item to display unit (49) for display. The user looks at the displayed picture and can check that rejection of purchase of the commodity has been accepted.

[0089]

On the other hand, in step S88, if it is judged that the user agrees to the purchase of the commodity, the process goes to step S94, and the user selects the YES button (the button with the characters of YES on it as shown in Figure 16). In this case, the WWW browser requests transfer of the picture of the URL corresponding to selection of the YES button. When charging proxy (11) receives the signal of request for transfer of the assignment picture of selection of the YES button from the WWW browser in step S95, user information, such as name, address, telephone number, etc., corresponding to the user ID is acquired from the user ID database, the process then goes to step S96. In this step, together with the user information acquired in step S95, the signal requesting transfer of the assignment picture received from the WWW browser is transferred to the WWW server.

[0090]

When the WWW server receives the request for transfer of the assignment picture by means of selection of the YES button from charging proxy (11), a picture of YES of consent is

generated in step S97, and it is transferred to charging proxy (11). Also, the commodity delivery procedure is executed corresponding to the user information sent from charging proxy (11).

[0091]

Also, if the address for delivery of the commodity is different from the registered address of the user, in step S94, the user inputs the address for delivery.

[0092]

The on-line shopping provider uses the information acquired from the WWW server in performing commodity distribution, management accounting, etc. However, if many man-hours are required for such treatment, it is also possible to perform this operation by asking the charging party to prepare the order voucher. Delivery of the order voucher can be performed by means of mail, e-mail, etc. Also, one may adopt the following scheme: the system of charging proxy (11) is connected to the system of the on-line shopping provider, so that delivery of the order voucher can be carried out automatically.

[0093]

Then, in step S98, charging proxy (11) acquires the credit card number corresponding to the user ID from the user ID database. Then, in step S99, the amount computed and stored in step S85 is requested from the credit card company acquired in step S98. However, in practice, based on the contract signed between the credit card company and the charging party that owns charging proxy (11), the charging party files a request for a prescribed amount lower than the purchase amount of the commodity to the credit card company. Then, the credit card company asks the user for the purchase amount of the commodity.

[0094]

Said charging proxy (11) sends the data item of the picture of YES of consent for supply from the WWW server to the WWW browser in step S100. In step S101, the WWW browser receives the data item of the picture, and displays it on display unit (49). As a result, for example, as shown in Figure 17, the picture of YES is displayed. The user can check the established state of the purchase from this displayed picture.

[0095]

In the case of HTTP, the request from the WWW browser and the response from the corresponding WWW server become a session. In each session, connection and cutoff of the line are carried out. In this case, in charging proxy (11), the IP address of the user is monitored, and

requirements from plural WWW browsers can be processed. If said treatment is ended for some reason, it is judged that there is no input of the selection signal of the YES button in said step S94, and the shopping treatment comes to an end.

[0096]

In the aforementioned application example, in step S76, when selection of purchase of the commodity is carried out at the WWW browser, in step S77, the selected data item is sent from charging proxy (11) to the WWW server, and judgment is made by the WWW server on whether it is an access from a member. If the access comes from a non-member, in step S79, a picture of not-for-use is sent from the WWW server to charging proxy (11). Also, the treatment of said step S78 and step S79 may be carried out in charging proxy (11).

[0097]

Also, in step S82, if checkup of the stock is not automatically performed in real time, for a commodity out of stock, either it is not displayed on the menu picture, or checkup of the stock is performed later. In this case, if the result of checkup of the stock is the judgment of out of stock, the server sends a voucher for cancellation of acceptance of the order to the charging party, and it also sends the user a message of cancellation of the order acceptance by means of an e-mail, letter, phone call or the like. /11

[0098]

In addition, in said application example, it is possible to adopt encryption in the shopping registration and in the registration treatment of the credit card number, etc.

[0099]

Also, as the settlement account for settlement of the fee, in addition to a credit card, it is also possible to use a bank account, etc.

[0100]

In the above, the fee is determined by detecting the value transferred on the internet. However, one may also adopt the following scheme: the on-line shopping provider registers the fee for the accessed URL and the transferred keyword with respect to the charging proxy beforehand, so as to prevent transfer and an unauthorized change of the fee data via the internet, and it is thus possible to lower the charge. In this case, charging proxy (11) computes (reads) the fee from the registration list.



[0101]

In the aforementioned application example, charging proxy (11) operates as an access provider and information provider. However, one may also adopt a scheme in which charging proxy (11) executes a caching function when data fed from information providers (4-1)-(4-3) are sent to terminal devices (1-1)-(1-4). In this case, the terminal devices store the data sent and received in charging proxy (11). As a result, when the same data are received by a prescribed terminal device, instead of actual access of the corresponding information provider (4-j), the data stored in charging proxy (11) are transferred. As a result, it is possible to provide the information quicker.

[0102]

Of course, it is also possible for charging proxy (11) to not have the function of an access provider or information provider.

[0103]

In addition, the function of the member information database of charging proxy (11) can be carried out by setting a dedicated member information server.

[0104]

In addition, in the application example shown in Figure 1, only one charging proxy (11) is set for internet (3). However, as shown in Figure 18, it is also possible to connect plural charging proxies (11-1)-(11-3) to internet (3), with said charging proxies (11-1)-(11-3) interconnected by dedicated line (81).

[0105]

In this way, each user can select the nearest charging proxy, and access the desired information provider from the nearest charging proxy.

[0106]

In this case, the charging proxy in use sets the domain name of the charging proxy in the WWW browser. Here, in the DNS that converts the domain name to the IP address, corresponding to the IP address of the terminal device of the WWW browser, the IP address of the charging proxy with preferable access efficiency is sent to the WWW browser. As a result, it is possible to assign charging proxies with the same domain name. Consequently, virtually, they can be perceived as a single charging proxy. According to this method, it is possible to perform dispersed treatment by plural charging proxies for accesses from most WWW browsers.

[0107]

In addition, in the aforementioned application example, the present invention has been explained for the case of purchase of a prescribed charging proxy. However, the present invention may also be used in receiving pay-broadcasting, downloading of computer programs, documents, pictures, audio data, etc., as well as for receiving other services.

[0108]

Also, the present invention may be used in statistical treatment of the access history stored in charging proxy (11), analysis of the attractiveness of commodities and services, determining the constitution of users purchasing prescribed commodities and services, and using the obtained data as marketing information.

[0109]

In the aforementioned application example, when the type, number, owner's address, name and other information of the credit card are registered in charging proxy (11), only the initial transmission from terminal device (1-i) through the telephone line (or internet (3)) is necessary, and a transmission does not occur in the later actual purchase operation of the commodities and services. Consequently, there is little chance that said information will be leaked to others and abused.

[0110]

Also, because charging proxy (11) can obtain the credit state of the credit cards of plural credit card companies, there is no need for information provider (4-j) to sign individual contracts with credit card companies. The system is simpler, and it is easy for relatively small companies and individuals to information providers.

[0111]

Effect of the invention

As explained above, for the information processing device described in Claim 1 and the information processing method described in Claim 3, the information processing device connected to the internet detects access to the server, and the settlement account of the use fee of the server is pre-stored in the information processing device. Consequently, transmission of the settlement account via internet is not performed except in registration, and there is little chance of leakage or abuse. Also, because charging is performed intensively with the proxy, the constitution of the server can be simplified. Consequently, it is easy for small companies and individuals to be servers.

### Brief description of the figures

Figure 1 is a diagram illustrating an example of the constitution of a network system using the information processing device of the present invention. -/18

Figure 2 is a block diagram illustrating an example of the constitution of charging proxy (11) shown in Figure 1.

Figure 3 is a block diagram illustrating an example of the constitution of terminal device (1-i) shown in Figure 1. /19

Figure 4 is a flow chart illustrating the on-line sign-up treatment in charging proxy (11) shown in Figure 1.

Figure 5 is a flow chart following that shown in Figure 4.

Figure 6 is a diagram illustrating the basic text base input in the network system shown in Figure 1.

Figure 7 is a diagram illustrating an example of the constitution of a user ID database.

Figure 8 is a diagram illustrating an IP address allotment table.

Figure 9 is a flow chart illustrating the operation of the application example in Figure 1.

Figure 10 is a flow chart following that shown in Figure 9.

Figure 11 is a flow chart following that shown in Figure 10.

Figure 12 is a diagram illustrating an example of display in step S71 shown in Figure 10.

Figure 13 is a diagram illustrating an example of display in step S75 of Figure 9.

Figure 14 is a flow chart illustrating in detail the treatment of selective data transfer in step S77 shown in Figure 9.

Figure 15 is a flow chart illustrating in detail the treatment of judgment of access from a member in step S78 shown in Figure 9.

Figure 16 is a diagram illustrating an example of display in step S87 shown in Figure 10.

Figure 17 is a diagram illustrating an example of display in step S101 shown in Figure 11.

Figure 18 is a diagram illustrating another example of constitution of a network system for which the information processing device of the present invention is adopted.

Figure 19 is a diagram illustrating an example of constitution of a network system in the prior art.

Figure 20 is a photograph of an intermediate-tone image displayed on a display unit illustrating an example of display of on-line shopping in the prior art.

Figure 21 photograph of an intermediate-tone image displayed on a display unit illustrating another example of display of on-line shopping in the prior art.

## Explanation of symbols

1-1 - 1-12	Terminal device
2-1 - 2-3	Access provider
3	Internet
4-1 - 4-5	Information provider
5	CAFIS
6-1 - 6-3	Computer system
11, 11-1 - 11-3	Charging proxy
81	Dedicated line

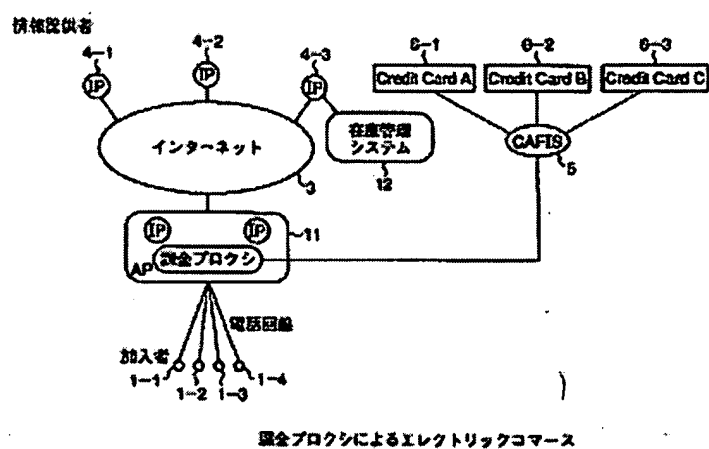


Figure 1

Key:	1-1	Subscriber
	3	Internet
	12	Stock management system
	a	Telephone line
	b	Charging proxy
	c	Information provider
	d	Electronic commerce by means of charging proxy

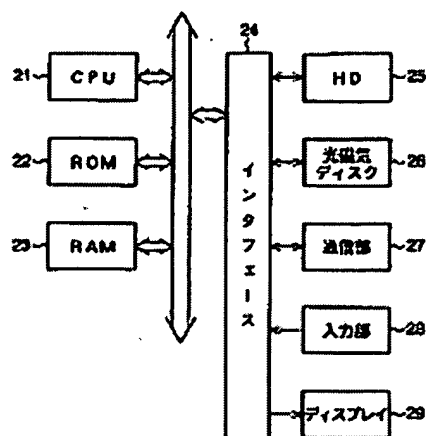


Figure 2. Charging proxy (11)

Key: 24 Interface  
 26 Magneto-optical disk  
 27 Communication part  
 28 Input part  
 29 Display

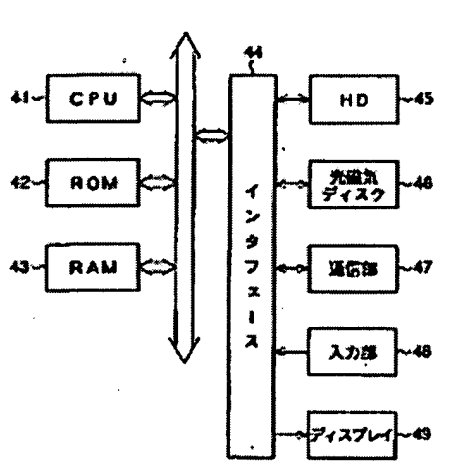


Figure 3. User terminal (1-i)

Key: 44 Interface  
 46 Magneto-optical disk  
 47 Communication part  
 48 Input part  
 49 Display



- S5 Please file your sign-up application by telephone or e-mail to the following window.  
We will quickly send you the application form.  
The reception time is \*\*\*\*.  
Customer service window: Telephone number  
E-mail address  
Thank you.
- S6 Cut off of the line
- S7 Input of your name, address, PO Box, and telephone number.
- S8 Display of reception date and reception number.
- S9 DB dedicated to inquiries
- S10 Delivery of application form by business group
- S11 Start of on-line sign-up
- S12 Do you want to see the agreement?
- S13 Display of the agreement
- S14 Do you accept the agreement?
- S16 Please apply for sign-up later.  
Thanks.
- S17 1) Your name > (last name/first name) separated input  
2) Name in Japanese characters > (last name/first name) separated input  
3) Sex > selected from (1. male 2. female)  
4) Birth date  
5) Job >  
6) Current address – prefecture and county >  
7) Current address  
8) Address in Japanese characters  
9) PO Box  
10) Telephone number  
11) Telephone type > (selection from 1. public line / 2. ISDN)  
12) FAX number  
13) Use communication environment >
- S18 Is there a person for contact in case of emergency? (Y/N)
- S19 14) Name of the person for contact in case of emergency  
15) Telephone number of the person for contact in case of emergency
- a Input of various items
- b To user ID input routine

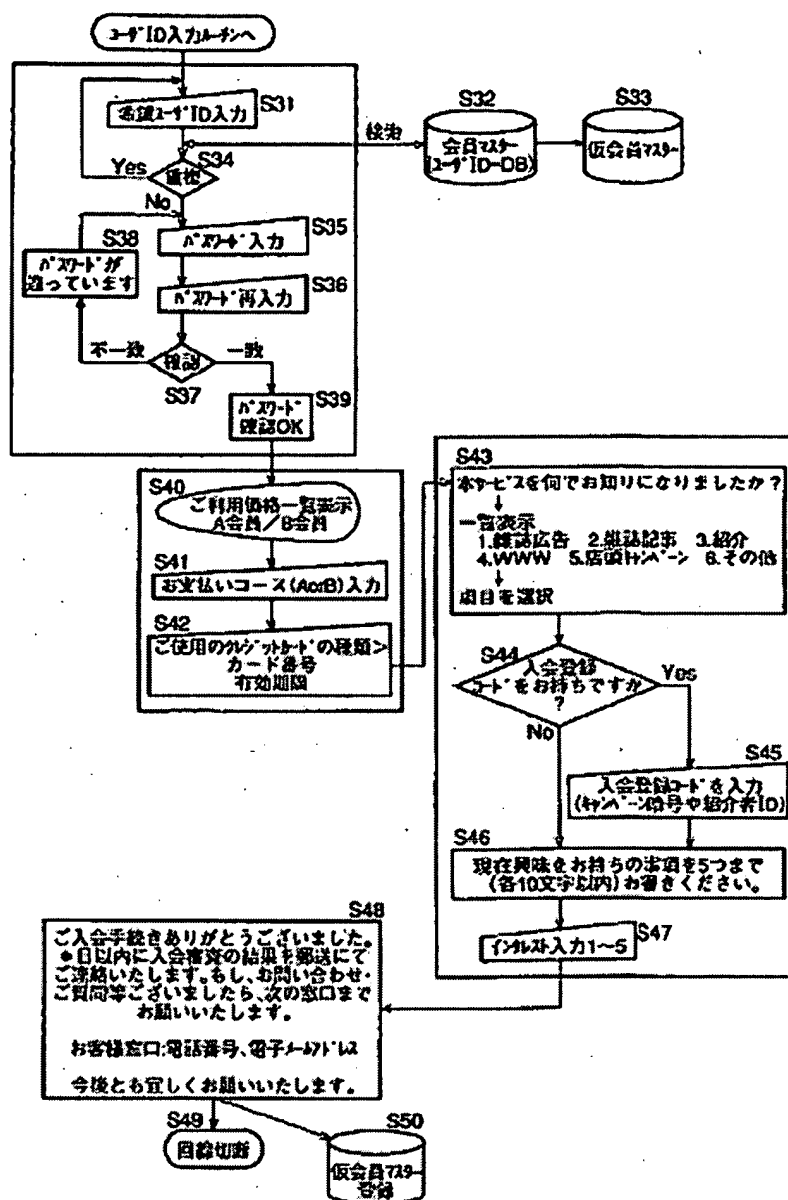


Figure 5

- Key:
- S31 Input of desired user ID
  - S32 Member master (user ID-DB)
  - S33 Temporary member master
  - S34 Repeat?
  - S35 Input of password
  - S36 Re-input of password
  - S37 Checks?
  - S38 Passwords are different
  - S39 Password checkup OK
  - S40 Displayed list of use prices  
Member A / Member B



- S41 Input of payment course (A or B)  
 S42 Type of credit card in use > credit card number, expiration time  
 S43 How did you learn of this service?  
 ↓  
 Display list  
 1. Advertisement in a magazine  
 2. Article in a magazine  
 3. Introduction by a friend  
 4. WWW  
 5. Campaign in shop  
 6. Other  
 ↓  
 Selection of items  
 S44 Do you have a sign-up registration code?  
 S45 Input of sign-up registration code (campaign encoding and ID of introducer)  
 S46 Please write up to 5 items of current interest (each of 10 characters or less)  
 S47 Input of items of interest 1-5  
 S48 Thank you for your sign-up application.  
 We will mail you the result of examination within \* days. For an inquiry or question, please contact the following window.  
 Customer's window: telephone number, e-mail address  
 Looking forward to further business in the future.  
 S49 Cutoff of line  
 S50 Registration of temporary member master  
 A To user ID input routine  
 B Retrieval.  
 C Not the same  
 D Same

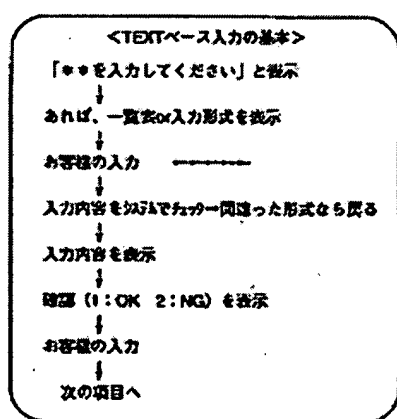
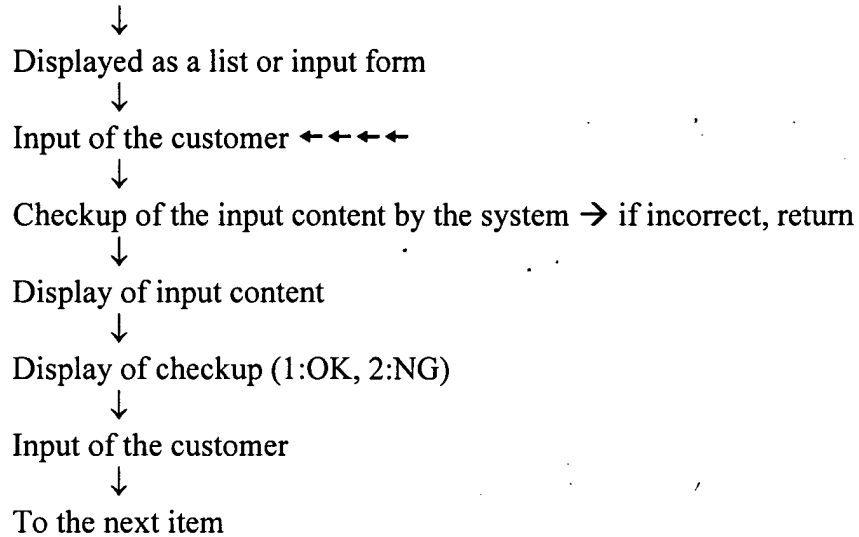


Figure 6

Key: A <Basics of TEXT base input>  
 "Please input \*\*" is displayed



ユーザIDデータベース

ユーザID	0005	0009
パスワード	ICHIRO	
氏名	山田一郎	
住所	東京都	
生年月日	1948年9月10日	
電話番号	03-3333-5555	
会員種別	A会員	
...	...	
クレジットカード種別	XX	
クレジットカード番号	12345678	
...	...	
割当IPアドレス	1.21.10...	
アクセス名	S13.S28...	
アクセスID	abc.xyz,	
...	...	

Figure 7

- Key: 1 User ID database
- 2 User ID
- 3 Password
- 4 Name
- 5 Address
- 6 Birth date
- 7 Telephone number
- 8 Member type
- ...
- 9 Type of credit card
- 10 Credit card number
- ...
- 11 Allotted IP address

- Access server  
Access file  
3 Ichiro Yamada  
Tokyo  
September 10, 1948  
4 Member A

IPアドレス割当テーブル

IPアドレス	割当ユーザID
IPアドレス1	ユーザID5
IPアドレス2	未使用
IPアドレス3	ユーザID9
...	...
IPアドレスN	ユーザID67

N < ユーザ総数

Figure 8

- Key: 1 IP address allotment cable  
2 IP address  
IP address 1  
IP address 2  
IP address 3  
....  
IP address N  
3 Allotted user ID  
User ID5  
Unused  
User ID9  
...  
User ID67  
4 N < total number of users

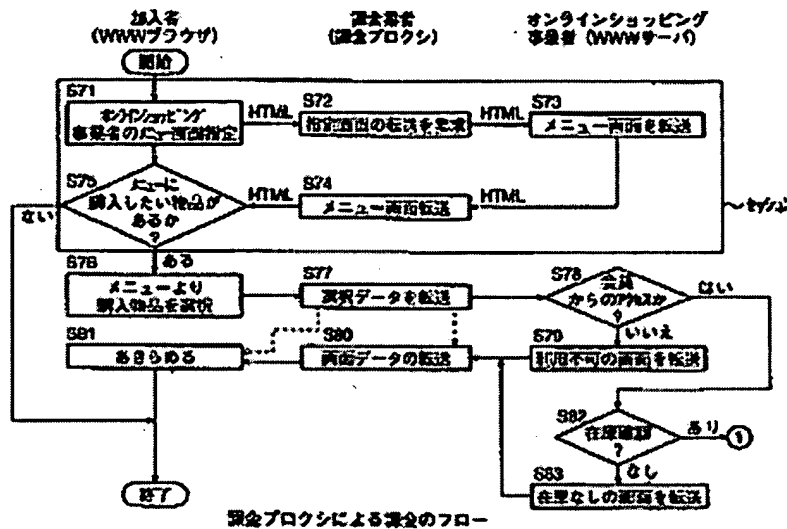


Figure 9

- Key:
- S71 Assignment of the menu picture of the on-line shopping provider
  - S72 Request for transfer of assigned picture
  - S73 Transfer of menu picture
  - S74 Transfer of menu picture
  - S75 Is there an object to be purchased in the menu?
  - S76 Selection of objects for purchase from the menu
  - S77 Transfer of selected data
  - S78 Is the access from a member?
  - S79 Transfer of the picture of not-for-use
  - S80 Transfer of picture data
  - S81 Cancellation
  - S82 Checkup of stock?
  - S83 Transfer of the picture indicating out of stock
  - 1 Subscriber (WWW browser)
  - 2 Charging party (charging proxy)
  - 3 On-line shopping provider (WWW server)
  - 4 START
  - 5 NO
  - 6 END
  - 7 Session
  - 8 YES
  - 9 Flow chart of charging by charging proxy

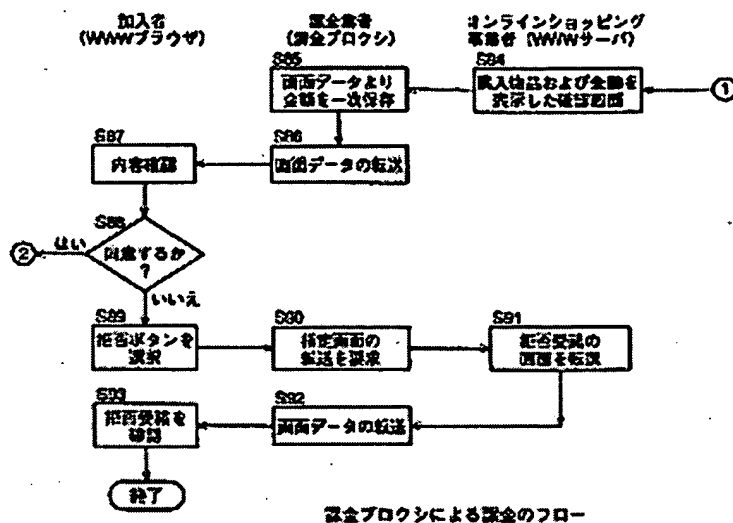


Figure 10

- Key:
- S84 Picture of checkup of display of the purchase object and amount
  - S85 Primary storage of the amount with the picture data
  - S86 Transfer of picture data
  - S87 Checkup of content
  - S88 Consent?
  - S89 Selection of rejection button
  - S90 Request for transfer of assignment picture
  - S91 Transfer of the picture of reception of rejection
  - S92 Transfer of picture data
  - S93 Checkup of reception of rejection
  - 1 Subscriber (WWW browser)
  - 2 Charging party (charging proxy)
  - 3 On-line shopping provider (WWW server)
  - 4 NO
  - 5 YES
  - 6 END
  - 7 Flow of charging by charging proxy

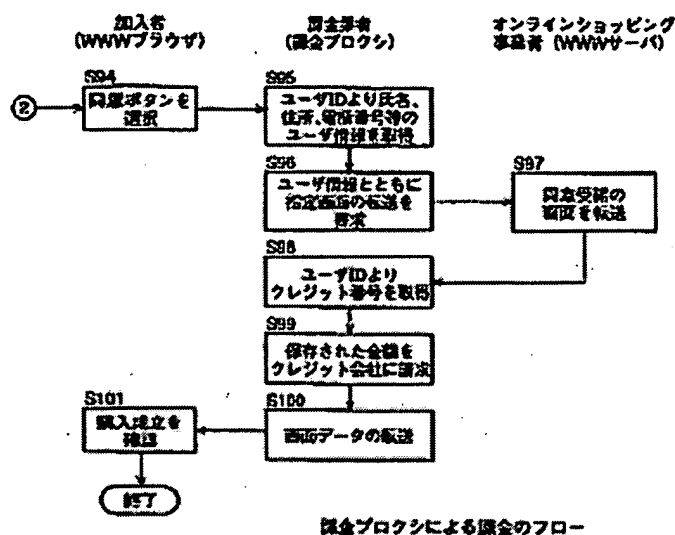


Figure 11

- Key:
- S94 Selection of YES button
  - S95 Acquisition of name, address, telephone number, and other user information from user ID
  - S96 Request for transfer of the assignment picture together with the user information
  - S97 Transfer of the picture of reception of YES of consent
  - S98 Acquisition of credit card number from user ID
  - S99 Request for the stored amount to the credit card company
  - S100 Transfer of picture data
  - S101 Checkup of establishment of purchase
  - 1 Subscriber (WWW browser)
  - 2 Charging party (charging proxy)
  - 3 On-line shopping provider (WWW server)
  - 4 END
  - 5 Flow chart of charging by means of charging proxy

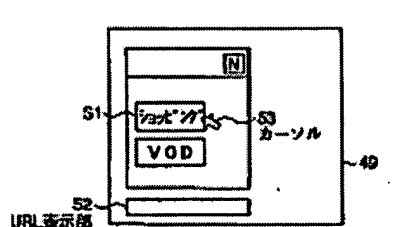


Figure 12

- Key:
- 52 URL display part
  - 53 Cursor
  - S1 Shopping

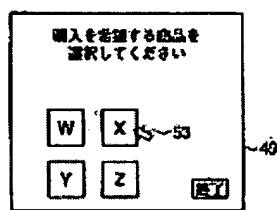


Figure 13

- Key: 1 Please select the commodity you want to purchase.  
2 END

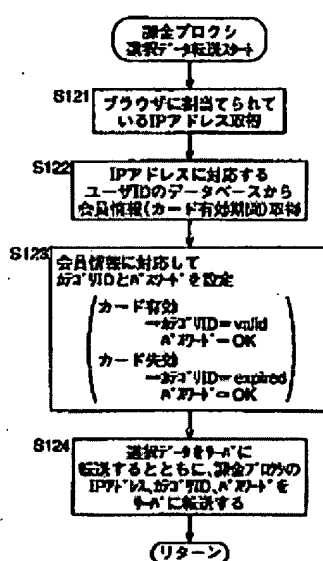


Figure 14

- Key: S121 Acquisition of IP address allotted to the browser  
S122 Acquisition of member information (card expiration period) from the database of the user ID corresponding to the IP address  
S123 Setting of category ID and password corresponding to the member information  
(Card is effective  
→ Category ID = valid  
Password = OK  
Card is expired  
→ Category ID = expired  
Password = OK)  
S124 Together with transfer of the selected data to the server, the IP address, category ID and password of the charging proxy are transferred to the server  
1 Charging proxy  
Start of transfer of selected data  
2 Return

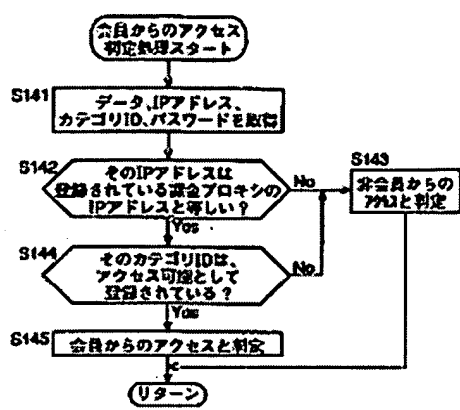


Figure 15

- Key: S141 Acquisition of data, IP address, category ID, and password  
 S142 Is the IP address the same as the IP address of the registered charging proxy?  
 S143 Judgment of access from a non-member  
 S144 Is the category ID registered as accessible?  
 S145 Judgment of access from a member  
 1 Start of judgment treatment of access from a member  
 2 Return

次の商品をご購入ですね？

1. W	1,200円
2. Y	3,500円
計	4,700円

Figure 16

- Key: 1 Do you want to purchase the following commodities?  
 2 Sum  
 3 \_\_\_ yen

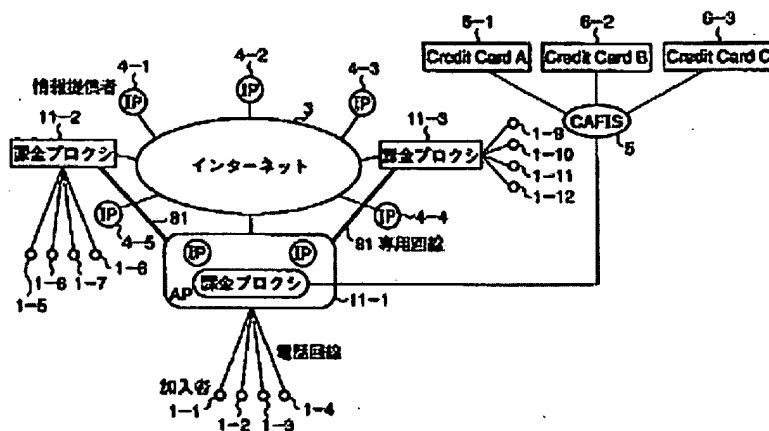
次の商品の注文をありがとうございました。  
ありがとうございました。

1. W	1,200円
2. Y	3,500円
計	4,700円

Figure 17



Key: 1 We received your order for the following commodities. Thank you.  
 2 Sum  
 3 \_\_\_ yen



充電プロキシによるエレクトリックコマース

Figure 18

Key: 1-1 Subscriber  
 3 Internet  
 11-2, 11-3 Charging proxy  
 81 Dedicated line  
 a Telephone line  
 b Charging proxy  
 c Information provider  
 d Electronic commerce by means of charging proxy

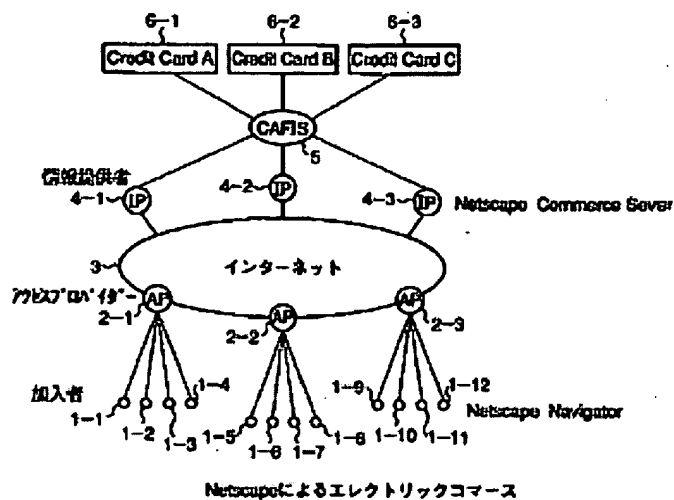


Figure 19

- Key: a      Electronic commerce by means of Netscape
- 1-1      Subscriber
  - 2-1      Access provider
  - 3        Internet
  - 4-1      Information provider

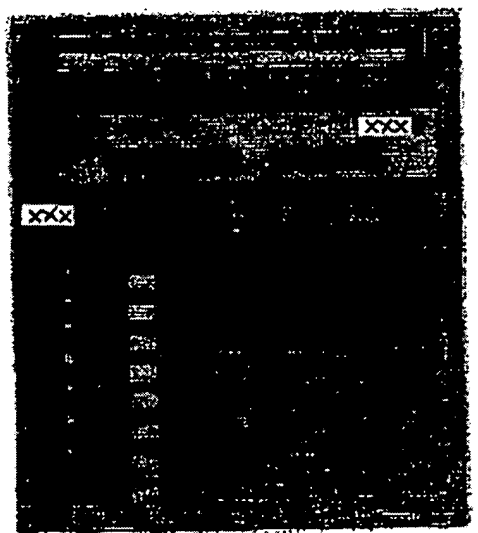


Figure 20

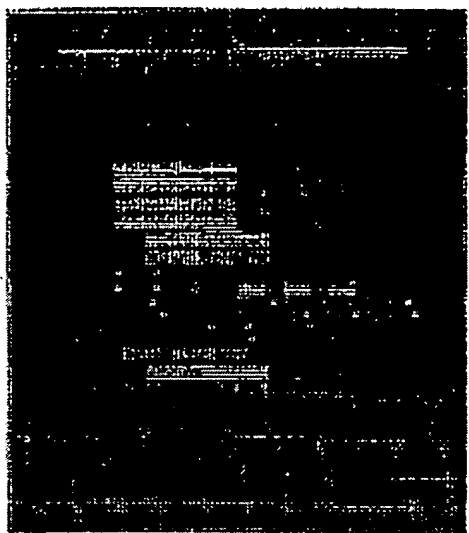


Figure 21

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